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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/563,886

05/18/2006

Katri Keski-Nisula

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EXAMINER

PATEL, YOGESH P

ART UNIT

PAPER NUMBER

3732

NOTIFICATION DATE

DELIVERY MODE

07/01/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO@WOLFBLOCK.COM

Office Action Summary	Application No. 10/563,886	Applicant(s) KESKI-NISULA, KATRI	
	Examiner YOGESH PATEL	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 25-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 May 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: No support for the term "bulkheads" as recited in claims 2, 4, 9-10, 15-17 found in the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

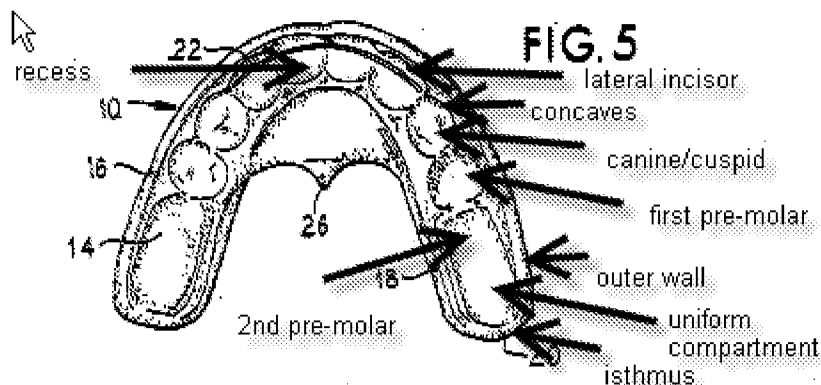
2. Claims 1-5, 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergersen (4,784,605) in view of Bergersen (4,830,612).

Bergersen '605 discloses a generally U-shaped arch (fig. 1) having a lower surface on the lower jaw side (fig. 5) including concaves for the teeth of the lower jaw, and an upper surface on the upper jaw side (fig. 1) including concaves for the teeth of the upper jaw, an isthmus 20 forming bottoms of the concaves and separating the upper and lower concaves, side walls of the concaves which are formed by outer walls on the labial or buccal side, respectively, and by inner walls on the lingual side, wherein the concaves comprise recesses arranged on the isthmus, at least part of the recesses being arranged for individual teeth, and wherein recesses for the back teeth consist of uniform compartments, which start from the second premolar and continue towards the

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molars at least partially to the area where the second permanent molar will erupt.

Bergersen '605 is silent regarding to recesses for the front teeth being essentially uniform, and the measurements of the appliance.



Bergersen '612 teaches recesses for the front teeth being essentially uniform (fig. 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Bergersen'605 by providing the claimed elements as taught by Bergersen' 612 in order to properly fit the front teeth into the recess area.

Bergersen'605 further discloses the compartment are shaped like continuous trough as seen in figure above, also individual blank for canine teeth as shown in figure above and the size of the appliance (col. 2, lines 38-41), but not specifically as claimed. However, the dental structure of users (e.g. dentition) varies in sizes depending on particular users' age. For example, if the user is 15 years old, then the length of the compartment would be lesser than the compartment length for user that is older than specified age and vise versa. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to have provided the

appliance in variety of sizes (e.g. as claimed) as taught by Bergersen'605 to the dental appliance of Bergersen'605 so that large group of users may benefit from correcting open-bite tendencies and tongue thrust problems using the appliance.

3. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergersen'605 in view of Bergersen'612 as applied to claim 1 above, and further in view of Bergersen (5,645,420).

Bergersen'605/ Bergersen'612 discloses the invention substantially as claimed except for thickness of the isthmus.

Bergersen '420 teaches many arrangements may be incorporated in a dental appliance to address different problems by varying the thickness of the isthmus (col. 6, lines 49- 67, col. 7, lines 1-42). For example, for overbite corrections, a thickness of the isthmus increases at the anterior region relative to the posterior region as compared with the normal occlusion design would optimally be between 4 to 5 mm thereby causing the anterior teeth to be depressed 1 to 2 mm before contact of the posterior teeth is possible. Similarly, by increasing the thickness of the isthmus in the posterior region relative to the anterior region, an open bite can be corrected. The variation in thickness of the isthmus is occurs in step because the thickness is different in anterior and posterior portions. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Bergersen'605/ Bergersen'612 by providing a varying thickness of the isthmus of the device as taught by Bergersen'420 in order to correct open bite and overbite problems.

4. Claims 9-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Bergersen'605 in view of Bergersen'612 as applied to claim 1 above, and further in view of DeLuke (6,837,246).

Bergersen'605/ Bergersen'612 discloses the invention substantially as claimed except for an inner wall (e.g. bulkhead) on the side of the lower jaw forms a wing constricting the tongue at least sideways.

DeLuke teaches a dental appliance having the inner wall on the side of the lower jaw forms a wing constricting the tongue at least sideways; the wing is shaped to help keep the device firmly in place in the individual's mouth (abstract). Further, the wing has been continued at least essentially aligned downwards with the surface of the inner wall that it extends lower than the corresponding outer wall (fig. 1-3), and has been arranged so as to reach the immediate proximity of the base of the mouth cavity (fig. 1). DeLuke further teaches shape of the lower wing, particularly in the molar area, follows essentially the shape of the lower side jaw arch (fig. 1), and the downwards dimension of the wing has been reduced at the point of the ligament of the tongue (fig. 1). DeLuke does not explicitly teach lower wing extends approximately at the point of the first molar to a distance of 14 mm as a maximum of the down side surface of the isthmus, in which case the distance is approximately 3 to 6 mm smaller in the area of the ligament of the tongue, however the figures clearly shows that the wing is reduced at the point of the ligament of tongue. If the wing is not reduced at the point of the ligament of the tongue, then it would be difficult to maintain the appliance in the mouth. Therefore, it would have

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been obvious to a person of ordinary skill in the art to reduce the wing at the point of the ligament of the tongue to maintain the appliance in the mouth. Furthermore, DeLuke teaches the outer wall 14 on the upper jaw side surface has been continued upwards to the wall surface in such a way that it extends above the gum line (fig. 3), and in relevant range because if measured from the isthmus to the top surface of the appliance is too large, then the appliance would be inappropriate for the user because there would be no passage for saliva to exit the appliance. Further the size of the appliances corresponds increasing the width and the height of the dental arch to make appropriate for young children thru adults (end of col. 2 to col.3), thus outer wall is also increased in terms of height for adult users. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to have provided the wing of DeLuke to the dental appliance of Bergersen'605 for enhancing retention of the appliance into the user's mouth and to encourage users to breath through the nose, and which can serve as a diagnostic aid or test device to access a patient's problems (summary of the invention).

Response to Arguments

5. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOGESH PATEL whose telephone number is (571)270-3646. The examiner can normally be reached on 8:00 to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Y. P./

Examiner, Art Unit 3732

/Cris L. Rodriguez/

Supervisory Patent Examiner, Art Unit 3732